

**Syngenta Crop Protection, LLC**  
**Post Office Box 18300**  
**Greensboro, NC 27419**

**In Case of Emergency, Call**  
**1-800-888-8372**

**1. PRODUCT IDENTIFICATION**

Product Name:	<b>VIBRANCE EXTREME</b>	Product No.:	A16874F
EPA Signal Word:	Caution		
Active Ingredient(%):	Difenoconazole (5.86%)	CAS No.:	119446-68-3
Chemical Name:	1H-1,2,4-Triazole, 1-[[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl]methyl]-		
Chemical Class:	Triazole Fungicide		
Active Ingredient(%):	Mefenoxam (1.46%)	CAS No.:	70630-17-0 & 69516-34-3
Chemical Name:	(R,S)-2-[(2,6-dimethylphenyl)-methoxyacetyl-amino]-propionic acid methyl ester		
Chemical Class:	Phenylamide Fungicide		
Active Ingredient(%):	Sedaxane (1.22%)	CAS No.:	874967-67-6
Chemical Name:	1H-Pyrazole-4-carboxamide, N-(2-[1,1'-bicyclopropyl]-2-ylphenyl)-3-(difluoromethyl)-1-methyl-		
Chemical Class:	Fungicide		
EPA Registration Number(s):	100-1382	Section(s) Revised:	<b>9</b>

**2. HAZARDS IDENTIFICATION**
Health and Environmental

Harmful if inhaled. Causes mild eye irritation.

Hazardous Decomposition Products

Not Available

Physical Properties

Appearance: Red opaque liquid

Odor: Faint paint

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz and Cristobalite	10 mg/m <sup>3</sup> /(%SiO <sub>2</sub> +2) (respirable dust)	0.025 mg/m <sup>3</sup> (respirable silica)	0.05 mg/m <sup>3</sup> (respirable dust) **	IARC 1; ACGIH A2
Montmorillonite Clay	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable)	10 mg/m <sup>3</sup> TWA (total); 3 mg/m <sup>3</sup> TWA	Not Established	No
Glycerin	15 mg/m <sup>3</sup> TWA (total); 5 mg/m <sup>3</sup> TWA (respirable)	10 mg/m <sup>3</sup> TWA (mist)	Not Established	No
Difenoconazole (5.86%)	Not Established	Not Established	8 mg/m <sup>3</sup> TWA ***	No

Mefenoxam (1.46%)	Not Established	Not Established	10 mg/m <sup>3</sup> TWA ***	No
Sedaxane (1.22%)	Not Established	Not Established	< 0.1 mg/m <sup>3</sup> 8-hr TWA	No

\*\* recommended by NIOSH

\*\*\* Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.  
Syngenta Hazard Category: D\*

#### 4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

**Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

**Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

**Inhalation:** If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

##### Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

##### Medical Condition Likely to be Aggravated by Exposure

Not Available

#### 5. FIRE FIGHTING MEASURES

##### Fire and Explosion

Flash Point (Test Method):	> 214°F (Pensky-Martens CC)	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	779°F	
Flammability:	Not Applicable	

##### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

##### In Case of Fire

Use dry chemical, foam or CO<sub>2</sub> extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

#### 6. ACCIDENTAL RELEASE MEASURES

##### In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover

entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

## 7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

- Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
- Eye Contact: Where eye contact is likely, use chemical splash goggles.
- Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.
- Inhalation: A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH certified respirator with an organic vapor (OV) cartridge or canister with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Red opaque liquid
Odor:	Faint paint
Melting Point:	Not Available
Boiling Point:	Not Available
Specific Gravity/Density:	1.13 g/ml ; 9.31 lbs/gal
pH:	6.0 - 7.5 (neat 68°F - 72°F)

### Solubility in H<sub>2</sub>O

Difenoconazole:	15 mg/l @ 77°F (25°C)
Mefenoxam:	26 g/l @ 77°F (25°C)
Sedaxane:	14 mg/l @ 77°F (25°C)

### Vapor Pressure

Difenoconazole:	2.5 x 10 <sup>(-10)</sup> mmHg @ 77°F (25°C)
Mefenoxam:	2.5 x 10 <sup>(-5)</sup> mmHg @ 77°F (25°C)
Sedaxane:	4.9 x 10 <sup>(-10)</sup> mmHg @ 68°F (20°C)

## 10. STABILITY AND REACTIVITY

Stability:	Stable under normal use and storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Not Available
Materials to Avoid:	Not Available
Hazardous Decomposition Products:	Not Available

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Female Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5050 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.63 mg/l air - 4 hours
Eye Contact:	Minimally Irritating (Rabbit)	
Skin Contact:	Non-Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

### Reproductive/Developmental Effects

Difenoconazole: None observed.  
Mefenoxam: None observed.  
Sedaxane: Did not show teratogenic effects in animal experiments.  
Did not show reproductive toxicity effects in animal experiments.

### Chronic/Subchronic Toxicity Studies

Difenoconazole: Kidney and liver effects at high doses (>5000 ppm; rats); Eye effects in dogs at high dose levels.  
Mefenoxam: Liver effects at high dose animal tests.  
Sedaxane: STOT - Repeated Exposure : No adverse effect has been observed in chronic toxicity tests.

### Carcinogenicity

Difenoconazole: 2/70 male rats in the highest dose group (20000 ppm) were found to have squamous cell carcinoma in the non-glandular stomach. Effect did not occur in female rats or in mice and not considered relevant to humans.  
Increase in brain tumors (mice) at doses exceeding the Maximum Tolerated Dose (MTD) (>2500 ppm).  
Mefenoxam: None observed.  
Sedaxane: Did not show mutagenic effects in animal experiments.  
Did not show treatment related tumor findings in animal experiments. However, the data is still under review with external agencies.

### Other Toxicity Information

None

### Toxicity of Other Components

Crystalline Silica, Quartz and Cristobalite

Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans.  
Experimental animals exposed to crystalline silica developed respiratory tract cancers.

Glycerin

Test results reported in Section 11 for the final product take into account any acute hazards related to the glycerin in the formulation.

Montmorillonite Clay

Prolonged inhalation of excessive concentrations of dust may lead to lung injury.

### Target Organs

#### Active Ingredients

Difenoconazole: Brain, liver, kidney, gastrointestinal tract

Mefenoxam: Liver

Sedaxane: Not Applicable

#### Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Glycerin: Not Applicable  
Montmorillonite Clay: Respiratory tract

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity Effects

#### Difenoconazole:

Fish (Rainbow Trout) 96-hour LC50 1.06 ppm  
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.77 ppm  
Bird (Mallard Duck) 21-day LD50 > 2150 mg/kg

#### Mefenoxam:

Fish (Rainbow Trout) 96-hour LC50 > 121 ppm  
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 113 ppm  
Bird (Bobwhite Quail) 14-day LD50 981 mg/kg

#### Sedaxane:

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 6.10 mg/l  
Green Algae 96-hour EbC50 1.9 mg/l  
Fish (Carp) 96-hour LC50 0.62 mg/l

### Environmental Fate

#### Difenoconazole:

The information presented here is for the active ingredient, difenoconazole.  
Stable in soil and water. Low to moderate mobility in soil. Sinks in water (after 24 h).

#### Mefenoxam:

The information presented here is for the active ingredient, mefenoxam.  
Does not bioaccumulate. Not persistent in soil or water. Moderate mobility in soil. Mixes/sinks (after 24 h).

#### Sedaxane:

The information presented here is for the active ingredient, Sedaxane.  
Material is not readily biodegradable. Material is not persistent in soil.

## 13. DISPOSAL CONSIDERATIONS

### Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

## 14. TRANSPORT INFORMATION

### DOT Classification

Ground Transport - NAFTA  
Not regulated.

### Comments

Water Transport - International  
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Difenoconazole), Marine Pollutant

Hazard Class: Class 9  
Identification Number: UN 3082  
Packing Group: PG III

Air Transport  
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Difenoconazole)  
Hazard Class: Class 9  
Identification Number: UN 3082  
Packing Group: PG III

## 15. REGULATORY INFORMATION

### EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Not Applicable

### California Proposition 65

This product is not registered, sold, manufactured or distributed in the State of California.

### CERCLA/SARA 304 Reportable Quantity (RQ)

Not Applicable

### RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

### TSCA Status

Exempt from TSCA, subject to FIFRA

## 16. OTHER INFORMATION

### NFPA Hazard Ratings

Health: 3  
Flammability: 1  
Instability: 0

### HMIS Hazard Ratings

Health: 3  
Flammability: 1  
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

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Replaces: 7/9/2012

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS